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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,098

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W. Dennis Slafer

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EXAMINER

RIVERA, JOSHEL OMAR

ART UNIT

PAPER NUMBER

4122

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,098	Applicant(s) SLAFER, W. DENNIS	
	Examiner JOSHEL RIVERA	Art Unit 4122	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/02/2008, 07/28/2006</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 2, 3, 4, 5, 7, 9, 10, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Okubo et al (US Patent 5,480,596).
2. Claim 1 describes an apparatus comprising of a drum with surface having a predetermined pattern of protrusions for embossing and a radiation source. This is described by the prior art on column 5 lines 2 – 6 and lines 17 – 21 and in Figure 1 identified with number 3. Claims 2, 3, 4, and 20 teaches the presence of a dispenser for dispensing a liquid for softening the surface of the polymer layer, a liquid polymeric material that can be hardened by radiation and a dye. The prior art teaches the presence of such a dispenser on column 5 lines 7 - 13, column 6 lines 54 - 66, column 7 lines 1 – 14 and is shown on Figure 1 identified with the numbers 9, 10 and 11. Claim 5 describes a backing roller that presses the elongated linear polymer layer against the drum which can be seen on Figure 1 of the prior art items numbered 8 and 14. Claim 7 describes a deposition source for applying an optical recording layer which is described in the prior art on column 8 lines 16 – 25 and seen on Figure 3 item numbered 35.

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Claims 9 and 10 describes the patterns on the surface of the drum which is anticipated by the prior art on column 6 lines 1 - 4.

3. Claims 11, 12, 13, 14 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Norden (WO 97/14142). Claim 11 describes the process of manufacturing pre-formatted linear optical data storage media as follow:

- a. Softening a surface of an elongated linear polymer layer
- b. Embossing at least one pattern of optically readable embossment in the softened surface using a drum having protrusions
- c. Hardening the embossed surface of the elongated linear polymer layer prior to removing the linear polymer layer from the drum.

Claim 12 limits the first step of the process by dispensing a softening agent onto the surface of the polymer layer. Claim 13 applies a liquid polymeric material that can be hardened by radiation to the surface of the polymer layer and the embossments are made in this layer that can be hardened through radiation. The prior art teaches softening the surface with a softening agent (column 5 lines 25 – 29), applying a liquid polymeric material that can be hardened by radiation and the embossments are made in this layer (column 5 lines 7 – 10), embossing on the soften surface using a drum with protrusions (column 4 lines 18 – 23) and hardening the embossed surface (column 5 lines 7 – 16). Claim 14 determines applying an optical recording layer over the pattern of optically readable embossments, which is anticipated by the prior art on column 6 lines 13 – 15. Claim 16 is also anticipated by the prior art on column 7 lines 5 – 13 and column 8 lines 7 – 9.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo et al (US Patent 5,480,596) in view of Norden (WO 97/14142). Okubo states on column 8 lines 19 - 20: "The recording layer material can be coated using various printing methods" leaving it open for any type of printing method but fails to teach the method described in the claim. Such method is described by Norden on column 9 lines 29 - 31: "...the embossed surface of the layer... has been coated with a thin metallic reflection layer... In this case, the layer... is comprised of Al, has a thickness of 100 nm, and has been deposited using Vacuum Vapour Deposition." It would have been obvious with ordinary skills in the art to use a vacuum chamber described by Norden in Okubo's apparatus to eliminate possible contamination by the environment.
5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Okubo et al. (US Patent 5,480,596) in view of Takakuwa et al. (US Patent 6,162,519). Claim 8 describes the presence of an "optical head array adapted to write recording marks in the optical recording layer..." While Okubo does teach the coating of an optical recording layer (column 8 lines 16 - 20) it fails to teach a method to write recordings marks using an optical head array. Takakuwa teaches a method to write recording marks using a

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"...pattern based on desired data using a laser cutting machine" (column 13 lines 12 – 15). Therefore it would have been obvious to someone with ordinary skills in the art to add an optical head array like the one described by Takakuwa in Okubo's apparatus to write recording marks on the recording layer.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Norden (WO 97/14142) in view of Takakuwa et al. (US Patent 6,162,519). Norden teaches the method to form an optical recording layer (column 6 lines 13 – 15) but fails to teach a method to form recording marks in the optical recording layer. Takakuwa teaches about an optical disk in which comprises "...a data recording surface which is formed on...substrate and on which bumps have been formed based on prescribed data..." (column 13 lines 65 – 67). Therefore it would have been obvious for someone with ordinary skills in the art to add the method described by Takakuwa as an additional step for the method of forming an optical recording layer described by Norden.

7. Claims 17, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Norden (WO 97/14142) in view of Okubo et al. (US Patent 5,480,596). Claims 17 and 18 describes the protrusions created during the embossment process. This process is taught by Norden (column 4 lines 18 – 23) but fails to describe the protrusions and information on the protrusions. Okubo teaches about the description of the protrusions and information provided by the embossments (column 6 lines 1 – 4). Claim 19 states that a recordable layer is embedded into the polymer layer simultaneous with the embossment. Norden teaches the method to create the embossments but fails to affirm if the recordable layer is embedded into the polymer layer simultaneously with the

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embossment. Okubo, using his apparatus (shown in Figure 1), teaches that the recordable layer **9** embedded into the polymer layer **1** simultaneously with the embossment. Therefore it would have been obvious to someone with ordinary skills in the art to use the apparatus described by Okubo for the process described by Norden so that the protrusions in Okubo's apparatus could provide the information needed in Norden's methodology for the manufacturing of the final product. Also Okubo's apparatus is capable of simultaneously embed the recordable layer into the polymer layer with the embossment.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOSHEL RIVERA whose telephone number is (571) 270-7655. The examiner can normally be reached on Monday - Thursday 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (571) 272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. R./
Examiner, Art Unit 4122

/Milton I. Cano/
Supervisory Patent Examiner, Art Unit 4122